

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 - 12. (cancelled)

13. (new) A harvester for a forestry machine, comprising grapple means for grasping a tree stem, a cutting tool for cutting off the tree stem, a limbing or trimming device for trimming the tree stem, advancement means for advancing the tree stem in an axial direction past the trimming device and the cutting tool, a first measurement device for measuring a length of the tree stem and a second measurement device for measuring how a transverse dimension of the tree stem varies along its length, said second measurement device including movable measurement means for contact-free detection of an outer contour of the tree stem, from which a diameter is calculable, and the second measurement device being located between the trimming device and the advancement means for counteracting dirtying of the second measurement device.

14. (new) The harvester as claimed in Claim 13, wherein the second measurement device is disposed beyond a gap counting from the tree stem for counteracting dirtying of the second measurement device.

15. (new) The harvester as claimed in Claim 13, wherein the second measurement device is disposed above the tree stem during the trimming operation for avoiding dirtying of the second measurement device.

16. (new) The harvester as claimed in Claim 13, wherein the second measurement device includes a processing unit for receiving positional indications from the movable measurement means on detection of the outer contour from which the diameter is calculable.

17. (new) The harvester as claimed in Claim 16, wherein the processing unit is operative to control the movements of the movable measurement means.

18. (new) The harvester as claimed in Claims 13, wherein the movable measurement means are movable in a direction substantially transversely directed in relation to the tree stem.

19. (new) The harvester as claimed in Claim 18, wherein the movable measurement means are movable in a direction at right angles to the tree stem.

20. (new) The harvester as claimed in Claim 13, wherein the movable measurement means are photocells.

21. (new) The harvester as claimed in Claim 13, wherein the movable measurement means are ultrasound devices.

22. (new) A method of measuring a transverse dimension of a tree stem in connection with felling thereof, the tree stem being moved axially past a measurement device in a harvester, comprising the steps of moving a pair of measurement means towards the tree stem, registering pairs of read-off values on detection of an outer contour of the tree stem, and calculating a transverse dimension of the tree stem from each said pair of

read-off values, and after detection of the outer contour, moving the measurement means a distance away from the tree stem in order thereafter to be moved once again towards the tree stem for a renewed detection of the outer contour, and replacing a read-off value which exceeds a previous read-off value by the previous value before a renewed calculation of the transverse dimension.

23. (new) The method as claimed in Claim 22, further comprising moving the tree stem axially past the measurement device in a tapering direction.

24. (new) The method as claimed in Claim 22, further comprising calculating a total volume of the tree stem and suitable cutting lengths directly from the calculated transverse dimension values and an associated length dimension.